

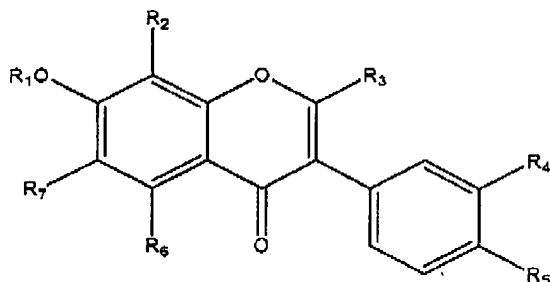
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Application No. 10/609,120
 Atty Dkt No. 11187-00016 (Endow-3-US)
 Reply to Office Action of October 3, 2006

LISTING OF THE CLAIMS

The following listing of claims will replace all prior versions and listing of claims in the application. For the Examiner's convenience a complete listing of all claims incorporating the amendments made herein is attached as Appendix A.

7. (Previously presented) A method of reducing alcohol consumption in a mammal comprising administering a compound of Formula I



Formula I

wherein:

- R₁ is selected from the group consisting of hydrogen, carboxy, halo, branched or straight chain (C₁-C₆)haloalkyl, (C₃-C₆)cycloalkoxyalkyl, (C₁-C₆)alkoxy(C₃-C₆)cycloalkyl, (C₃-C₆)cycloalkylcarbonyl, substituted or unsubstituted phenyl, and phenyl(C₁-C₆)alkyl, and heterocyclylcarbonyl, wherein substituents are from one to four and are selected from the group consisting of halo, aminocarbonyl, aminothiocarbonyl, carboxy, formyl, hydroxy, amino, carbamoyl, (C₁-C₃)alkyl, (C₁-C₃)haloalkyl, (C₁-C₃)alkoxy, (C₁-C₃)haloalkoxy, (C₁-C₃)alkylamino, di(C₁-C₃)alkylamino, (C₁-C₂)alkoxy(C₁-C₂)alkyl, (C₁-C₂)alkylamino(C₁-C₂)alkyl, di(C₁-C₂)alkylamino(C₁-C₂)alkyl, (C₁-C₃)alkylcarbonyl, (C₁-C₃)alkoxycarbonyl, (C₁-C₃)alkylaminocarbonyl, and di (C₁-C₃)alkylaminocarbonyl;
- R₂ is selected from the group consisting of hydrogen and alkoxy;
- R₃ is selected from the group consisting of hydrogen, (C₁-C₆) alkoxycarbonyl, and carboxy;
- R₄ is selected from the group consisting of hydrogen and hydroxy;

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R₅ is selected from the group consisting of hydrogen, carboxy, hydroxy, amino, halo, branched or straight chain (C₁-C₆)alkyl, (C₁-C₆)haloalkyl, (C₂-C₆)alkenyl, (C₃-C₆)alkadienyl, (C₁-C₆)alkoxy, (C₃-C₆)cycloalkoxy, (C₁-C₆)haloalkoxy, (C₃-C₆)cyclohaloalkoxy, (C₂-C₆)alkynyloxy, (C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₃-C₆)cycloalkoxyalkyl, (C₁-C₆)alkoxy(C₃-C₆)cycloalkyl, (C₁-C₆)alkylcarbonyl, (C₃-C₆)cycloalkylcarbonyl, (C₁-C₆)alkoxycarbonyl, (C₄-C₆)alkoxy-carbonylalkyl, (C₁-C₆)hydroxyalkyl, substituted or unsubstituted phenyl, phenyl(C₁-C₆)alkyl, heterocyclyl, heterocyclyloxy, heterocyclylcarbonyl, wherein substituents are from one to four and are selected from the group consisting of halo, aminocarbonyl, aminothiocarbonyl, carboxy, formyl, hydroxy, amino, carbamoyl, (C₁-C₃)alkyl, (C₁-C₃)haloalkyl, (C₁-C₃)alkoxy, (C₁-C₃)haloalkoxy, (C₁-C₃)alkylamino, di(C₁-C₃)alkylamino, (C₁-C₂)alkoxy(C₁-C₂)alkyl, (C₁-C₂)alkylamino(C₁-C₂)alkyl, di(C₁-C₂)alkylamino(C₁-C₂)alkyl, (C₁-C₃)alkylcarbonyl, (C₁-C₃)alkoxycarbonyl, (C₁-C₃)alkylaminocarbonyl, and di(C₁-C₃)alkylaminocarbonyl;

R₆ is selected from the group consisting of hydrogen and hydroxy; and

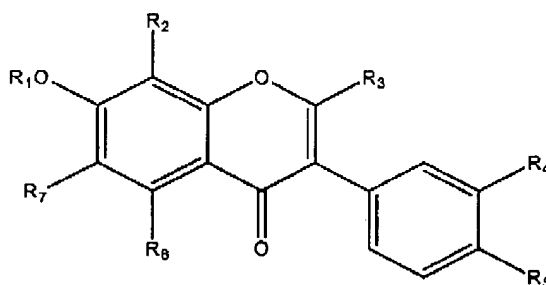
R₇ is selected from the group consisting of hydrogen and halogen;

with the proviso that R₅ cannot be hydroxy when R₁, R₂, R₃, R₄, R₆, and R₇ are all hydrogen;

in an amount effective to increase a concentration of 5-hydroxyindoleacetaldehyde or 3,4-dihydroxyphenylacetaldehyde formed during catabolism of serotonin or dopamine.

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8. (Previously presented) A method of reducing alcohol consumption in a mammal comprising administering a compound of Formula I



Formula I

wherein:

R₁ is selected from the group consisting of hydrogen, carboxy, halo, branched or straight chain (C₁-C₆)alkyl, (C₁-C₆)haloalkyl, (C₂-C₆)alkenyl, (C₃-C₆)alkadienyl, (C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₃-C₆)cycloalkoxyalkyl, (C₁-C₆)alkoxy(C₃-C₆)cycloalkyl, (C₁-C₆)alkylcarbonyl, (C₃-C₆)cycloalkylcarbonyl, (C₁-C₆)alkoxycarbonyl, (C₄-C₆)alkoxycarbonylalkyl, (C₁-C₆)hydroxyalkyl, (C₅-C₁₀)carboxyalkyl, substituted or unsubstituted phenyl, phenyl(C₁-C₆)alkyl, heterocyclyl, heterocyclylcarbonyl, wherein substituents are from one to four and are selected from the group consisting of halo, aminocarbonyl, aminothiocarbonyl, carboxy, formyl, hydroxy, amino, carbamoyl, (C₁-C₃)alkyl, (C₁-C₃)haloalkyl, (C₁-C₃)alkoxy, (C₁-C₃)haloalkoxy, (C₁-C₃)alkylamino, di(C₁-C₃)alkylamino, (C₁-C₂)alkoxy(C₁-C₂)alkyl, (C₁-C₂)alkylamino(C₁-C₂)alkyl, di(C₁-C₂)alkylamino(C₁-C₂)alkyl, (C₁-C₃)alkylcarbonyl, (C₁-C₃)alkoxycarbonyl, (C₁-C₃)alkylaminocarbonyl, and di(C₁-C₃)alkylaminocarbonyl;

R₂ is selected from the group consisting of hydrogen and alkoxy;

R₃ is selected from the group consisting of hydrogen, (C₁-C₆)alkoxycarbonyl, and carboxy;

R₄ is selected from the group consisting of hydrogen and hydroxy;

R₅ is selected from the group consisting of hydrogen, carboxy, halo, amino, branched or straight chain (C₁-C₆)alkyl, (C₁-C₆)haloalkyl, (C₂-C₆)alkenyl, (C₃-C₆)alkadienyl, (C₁-C₆)alkoxy, (C₃-C₆)cycloalkoxy, (C₁-C₆)haloalkoxy, (C₃-C₆)cyclohaloalkoxy, (C₂-C₆)alkynyloxy, (C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₃-C₆)cycloalkoxyalkyl, (C₁-C₆)alkoxy(C₃-C₆)cycloalkyl, (C₁-C₆)alkylcarbonyl, (C₃-C₆)cycloalkylcarbonyl, (C₁-C₆)alkoxycarbonyl, (C₄-

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C₆alkoxycarbonylalkyl, (C₁-C₆)hydroxyalkyl, substituted or unsubstituted phenyl, phenyl(C₁-C₆)alkyl, heterocyclyl, heterocyclyloxy, heterocyclcarbonyl, wherein substituents are from one to four and are selected from the group consisting of halo, aminocarbonyl, aminothiocarbonyl, carboxy, formyl, hydroxy, amino, carbamoyl, (C₁-C₃)alkyl, (C₁-C₃)haloalkyl, (C₁-C₃)alkoxy, (C₁-C₃)haloalkoxy, (C₁-C₃)alkylamino, di(C₁-C₃)alkylamino, (C₁-C₂)alkoxy(C₁-C₂)alkyl, (C₁-C₂)alkylamino(C₁-C₂)alkyl, di(C₁-C₂)alkylamino(C₁-C₂)alkyl, (C₁-C₃)alkylcarbonyl, (C₁-C₃)alkoxycarbonyl, (C₁-C₃)alkylaminocarbonyl, and di (C₁-C₃)alkylaminocarbonyl

R₆ is selected from the group consisting of hydrogen and hydroxy; and

R₇ is selected from the group consisting of hydrogen, halogen, and C₁-C₆ alkoxy,

in an amount effective to increase a concentration of 5-hydroxyindoleacetaldehyde or 3,4-dihydroxyphenylacetaldehyde formed during catabolism of serotonin or dopamine.

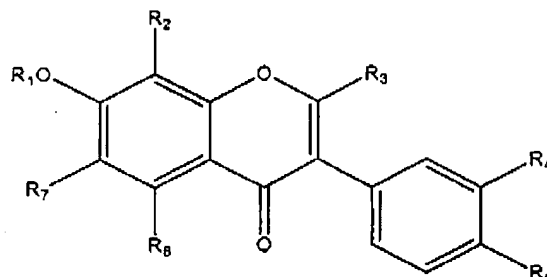
9. (Previously presented) The method of claim 7, wherein the mammal is a human.
12. (Previously presented) The method of claim 7, wherein the compound does not inhibit monoamine oxidase.
13. (Previously presented) The method of claim 7, wherein R₅ is hydroxy or amino.
14. (Previously presented) The method of claim 8, wherein R₁ is a straight chain alkyl.
15. (Previously presented) The method of claim 8, wherein R₁ is (C₁-C₆)hydroxyalkyl or (C₅-C₁₀)carboxyalkyl.
16. (Previously presented) The method of claim 7, wherein the compound is administered intraperitoneally, intramuscularly or orally.

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26. (canceled) A compound having the structure of Formula I



Formula I

wherein:

R₁ is selected from the group consisting of carboxy, halo, amino, branched or straight chain (C₃-C₆)cycloalkoxyalkyl, (C₁-C₆)alkoxy(C₃-C₆)cycloalkyl, substituted or unsubstituted phenyl, phenyl(C₁-C₆)alkyl, and heterocyclylcarbonyl, wherein substituents are from one to four and are selected from the group consisting of halo, aminocarbonyl, aminothiocarbonyl, carboxy, formyl, hydroxy, amino, carbamoyl, (C₁-C₃)alkyl, (C₁-C₃)haloalkyl, (C₁-C₃)alkoxy, (C₁-C₃)haloalkoxy, (C₁-C₃)alkylamino, di(C₁-C₃)alkylamino, (C₁-C₂)alkoxy(C₁-C₂)alkyl, (C₁-C₂)alkylamino(C₁-C₂)alkyl, di(C₁-C₂)alkylamino(C₁-C₂)alkyl, (C₁-C₃)alkylcarbonyl, (C₁-C₃)alkoxycarbonyl, (C₁-C₃)alkylaminocarbonyl, and di (C₁-C₃)alkylaminocarbonyl;

R₂ is selected from the group consisting of hydrogen and alkoxy;

R₃ is hydrogen;

R₄ is selected from the group consisting of hydrogen and hydroxy;

R₅ is selected from the group consisting of hydrogen, carboxy, hydroxy, halo, amino, branched or straight chain (C₁-C₆)alkyl, (C₁-C₆)haloalkyl, (C₂-C₆)alkenyl, (C₃-C₆)alkadienyl, (C₁-C₆)alkoxy, (C₃-C₆)cycloalkoxy, (C₁-C₆)haloalkoxy, (C₃-C₆)cyclohaloalkoxy, (C₂-C₆)alkynyloxy, (C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₃-C₆)cycloalkoxyalkyl, (C₁-C₆)alkoxy(C₃-C₆)cycloalkyl, (C₁-C₆)alkylcarbonyl, (C₃-C₆)cycloalkylcarbonyl, (C₁-C₆)alkoxycarbonyl, (C₄-C₆)alkoxycarbonylalkyl, (C₁-C₆)hydroxyalkyl, substituted or unsubstituted phenyl, phenyl(C₁-C₆)alkyl, heterocyclyl, heterocyclioxy, heterocyclylcarbonyl, wherein substituents are from one to four and are selected from the group consisting of halo, aminocarbonyl, aminothiocarbonyl, carboxy, formyl, hydroxy, amino, carbamoyl, (C₁-

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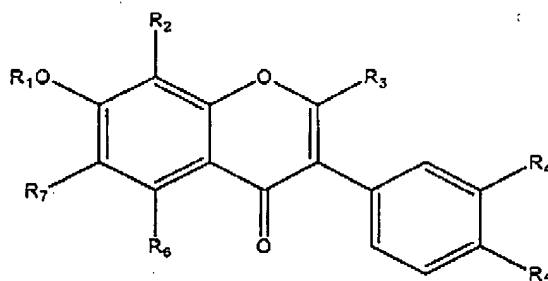
C₃)alkyl, (C₁-C₃)haloalkyl, (C₁-C₃)alkoxy, (C₁-C₃)haloalkoxy, (C₁-C₃)alkylamino, di(C₁-C₃)alkylamino, (C₁-C₂)alkoxy(C₁-C₂)alkyl, (C₁-C₂)alkylamino(C₁-C₂)alkyl, di(C₁-C₂)alkylamino(C₁-C₂)alkyl, (C₁-C₃)alkylcarbonyl, (C₁-C₃)alkoxycarbonyl, (C₁-C₃)alkylaminocarbonyl, and di (C₁-C₃)alkylaminocarbonyl;

R₆ is selected from the group consisting of hydrogen and hydroxy; and

R₇ is selected from the group consisting of hydrogen and halogen,

with the proviso that R₅ cannot be hydroxy when R₁, R₂, R₃, R₄, R₆, and R₇ are all hydrogen.

27. (previously presented) A compound for inhibiting ALDH-2 comprising Formula I:



Formula I

wherein:

R₁ is selected from the group consisting of hydrogen, carboxy, halo, amino, branched or straight chain (C₁-C₆)alkyl, (C₁-C₆)haloalkyl, (C₂-C₆)alkenyl, (C₃-C₆)alkadienyl, (C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₃-C₆)cycloalkoxyalkyl, (C₁-C₆)alkoxy(C₃-C₆)cycloalkyl, (C₁-C₆)alkylcarbonyl, (C₃-C₆)cycloalkylcarbonyl, (C₁-C₆)alkoxycarbonyl, (C₄-C₆)alkoxycarbonylalkyl, (C₁-C₆)hydroxyalkyl, (C₅-C₁₀)carboxyalkyl, substituted or unsubstituted phenyl, phenyl(C₁-C₆)alkyl, heterocyclyl, heterocyclylcarbonyl, wherein substituents are from one to four and are selected from the group consisting of halo, aminocarbonyl, aminothiocarbonyl, carboxy, formyl, hydroxy, amino, carbamoyl, (C₁-C₃)alkyl, (C₁-C₃)haloalkyl, (C₁-C₃)alkoxy, (C₁-C₃)haloalkoxy, (C₁-C₃)alkylamino, di(C₁-C₃)alkylamino, (C₁-C₂)alkoxy(C₁-C₂)alkyl, (C₁-C₂)alkylamino(C₁-C₂)alkyl, di(C₁-C₂)alkylamino(C₁-C₂)alkyl, (C₁-C₃)alkylcarbonyl, (C₁-C₃)alkoxycarbonyl, (C₁-C₃)alkylaminocarbonyl, and di (C₁-C₃)alkylaminocarbonyl;

R₂ is selected from the group consisting of hydrogen and alkoxy;

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R₃ is hydrogen;

R₄ is selected from the group consisting of hydrogen and hydroxy;

R₅ is selected from the group consisting of branched or straight chain (C₁-C₆)haloalkyl, (C₃-C₆)alkadienyl, (C₃-C₆)cycloalkoxy, (C₁-C₆)haloalkoxy, (C₃-C₆)cyclohaloalkoxy, (C₂-C₆)alkynyloxy, (C₁-C₆)alkoxy(C₁-C₆)alkyl, (C₃-C₆)cycloalkoxyalkyl, (C₁-C₆)alkoxy(C₃-C₆)cycloalkyl, (C₁-C₆)alkylcarbonyl, (C₃-C₆)cycloalkylcarbonyl, (C₁-C₆)alkoxycarbonyl, (C₄-C₆)alkoxycarbonylalkyl, (C₁-C₆)hydroxyalkyl, substituted or unsubstituted phenyl, phenyl(C₁-C₆)alkyl, heterocyclyl, heterocyclyloxy, heterocyclylcarbonyl, wherein substituents are from one to four and are selected from the group consisting of halo, aminocarbonyl, aminothiocarbonyl, carboxy, formyl, hydroxy, amino, carbamoyl, (C₁-C₃)alkyl, (C₁-C₃)haloalkyl, (C₁-C₃)alkoxy, (C₁-C₃)haloalkoxy, (C₁-C₃)alkylamino, di(C₁-C₃)alkylamino, (C₁-C₂)alkoxy(C₁-C₂)alkyl, (C₁-C₂)alkylamino(C₁-C₂)alkyl, di(C₁-C₂)alkylamino(C₁-C₂)alkyl, (C₁-C₃)alkylcarbonyl, (C₁-C₃)alkoxycarbonyl, (C₁-C₃)alkylaminocarbonyl, and di (C₁-C₃)alkylaminocarbonyl

R₆ is selected from the group consisting of hydrogen and hydroxy; and

R₇ is selected from the group consisting of hydrogen, halogen, and C₁-C₆ alkoxy.

28. (Previously presented) The compound of claim 26, wherein R₅ is hydroxy or amino.
29. (Previously presented) The compound of claim 27, wherein R₁ is a straight chain alkyl.
30. (Previously presented) The compound of claim 27, wherein R₁ is (C₁-C₆)hydroxyalkyl or (C₅-C₁₀)carboxyalkyl.

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